

### **REMARKS**

Applicant respectfully requests that the Examiner reopen the prosecution of the present application in accordance with 37 CFR § 41.50(b). Applicant appreciates the Examiner's thorough consideration with respect to the present application. Claims 1-18 are currently pending. Claim 1 is independent. Claims 13-18 have been added for the Examiner's consideration. The subject matter of claims 13-18 is fully supported by the original written description, including, but not limited to, paragraphs 0088-0091, Figs. 10 and 11, and original claims 1-12. Claim 1 has been amended. Reconsideration of this application is earnestly solicited.

### ***Claim Rejections Under 35 U.S.C. § 112***

Claims 1-12 have been rejected under 35 U.S.C. § 112, first and second paragraphs, as being unpatentable and/or indefinite for failing to particularly point out and distinctly claim the subject matter of the claimed invention. This rejection is respectfully traversed.

Without conceding the propriety of the Decision on Appeal, but merely to expedite the prosecution of the present application, Applicant has amended claim 1 to address the concerns cited by the Board at pages 41-43 of the minor informalities cited by the Examiner in the Office Action. In light of these non-narrowing amendments to claims 1 and 6-8, Applicant submits that the rejections under 35 U.S.C. § 112 have been obviated and/or rendered moot. Applicant's representative requests that the Examiner contact the undersigned upon entry and consideration of this response if these rejections are maintained in any form.

It appears that the Board did not understand steps b and c of original claim 1. In order to clarify these steps, claim 1 as amended recites, in part, a method of analyzing data obtained from well logs taken in a subsurface geological formation having thinly interbedded sandstone and shale layers to determine an expected value of the hydrocarbon pore volume of the

formation. The method includes performing a Monte Carlo inversion to find the ranges of bed-type parameters consistent with the measured well log data, *wherein performing the Monte Carlo inversion comprises computing distribution statistics for interval hydrocarbon pore volume*. This feature is further described at paragraphs 0088-090. A representative Monte Carlo trial showing distribution statistics is shown in Fig. 10. Applicant submits that this feature is fully supported and enabled by the original written description. Specifically, one of ordinary skill in the art would appreciate how to compute the distribution statistics described in claim 1 (and each of the exemplary statistics shown in Fig. 10 for the exemplary Monte Carlo trial). The method further includes *generating* a statistical distribution for hydrocarbon pore volume representing the expected value for, and an uncertainty in, the hydrocarbon pore volume from said computing distribution statistics from said Monte Carlo inversion. This feature is further described at paragraphs 0090 through 0091 of the original written description. Exemplary statistical displays generated by the recited method are shown in Fig. 11. Further, one of ordinary skill in the art would appreciate how to generate a statistical distribution as described in claim 1 (and each of the exemplary statistical distributions shown in Fig. 11). In addition, to further clarify this point, Applicant has provided additional claims 13-18 that provide specific examples (fully supported at paragraphs 0090-0091 of the specification) of generated statistical distributions. The histograms, central values (mean, median, P50) and other probability values are common statistics relied upon by one of ordinary skill in the art to analyze statistics such as those computed by the Monte Carlo inversion (claim 1, step b). Accordingly, this rejection should be withdrawn the present application should be permitted to issue.

### ***Claim Rejections Under 35 U.S.C. § 102/103***

The rejections of claims 1-12 under 35 U.S.C. §§ 102 and 103 have been reversed by the Board.

Applicant encourages the Examiner to contact the undersigned via telephone with any questions or concerns after entry and consideration of this response.

### CONCLUSION

Applicant has made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require action, it is respectfully requested that the Examiner contact the undersigned via telephone at 1.713.431.7725 so that such issues may be resolved as expeditiously as possible. For these reasons this application should now be considered to be in condition for allowance and such action is earnestly solicited.

Applicant respectfully petitions for any necessary extensions of time for entry and consideration of this response. If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 05-1328 for any additional fees under 37 C.F.R. §§ 1.16 or 1.17; particularly fees for filing this response which is effectively reopening prosecution in accordance with 37 CFR § 41.50(b).

Respectfully submitted,

Date: 24 December 2008

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